

REMARKS

In the Office Action, the Examiner rejected claims 1-6, 8, 12, 14, 15, and 21-25. Claims 9, 10, 13, and 16 are withdrawn from consideration. By the present Response, Applicants have cancelled claim 25 in an effort to advance prosecution. Upon entry of this amendment, claims 1-6, 8-10, 12-16, and 21-24 will be pending in the present application. Reconsideration and allowance of all pending claims are respectfully requested.

Rejections Under 35 U.S.C. § 101

The Examiner rejected claim 25 under 35 U.S.C. §101. Applicants respectfully traverse this rejection. However, Applicants have cancelled claim 25 in an effort to advance prosecution. Therefore, the rejection under 35 U.S.C. §101 is believed to be moot.

Rejections Under 35 U.S.C. § 112

Claim 25 is rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Applicants respectfully traverse this rejection. However, as indicated, Applicants have cancelled claim 25 in an effort to advance prosecution. Therefore, the rejection under 35 U.S.C. §112 is also believed to be moot.

Rejections Under 35 U.S.C. § 103

The Examiner rejected claims 1-5 under 35 U.S.C. 103(a) as being unpatentable over Cousin et al. (U.S. Patent No. 4,643,857, hereinafter “Cousin”) in view of McLeod (U.S. Patent No. 5,922,255, hereinafter “McLeod”); claims 6, 8, 14, 15, and 21-25 as being unpatentable over Cousin in view of McLeod and Kaspe (U.S. Patent No. 4,525,319, hereinafter “Kaspe”); claim 12 as being unpatentable over Cousin in view of McLeod and Bartlett et al. (U.S. Patent No. 5,164,419, hereinafter “Bartlett”). Claims 1, 14, and 21 are independent. Applicants respectfully traverse these rejections.

Legal Precedent

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). To establish a *prima facie* case, the Examiner must show that the combination includes *all* of the claimed elements. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). Further, obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984).

Further, it is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983); M.P.E.P. § 2145. Moreover, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (CCPA 1959); *see* M.P.E.P. § 2143.01. Similarly, if a proposed modification renders the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. M.P.E.P. § 2143.01 (*citing In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)). Lastly, it is improper to combine references when the combination requires substantial reconstruction or redesign of the main reference to arrive at the claimed invention. *In re Ratti*, 123 U.S.P.Q. at 349.

Independent Claims

Independent claim 1 recites, *inter alia*, “wherein said polymer foam has a density of about 16 kg per cubic meter to about 320 kg per cubic meter.” Similarly, claim 14 recites, *inter alia*, “wherein said cured polyurethane foam has a density of less than

about 320 kg per cubic meter.” Lastly, independent claim 21 recites, *inter alia*, “wherein the cured support foam comprises a density of less than about 320 kg per cubic meter.”

In contrast, none of the references cited by the Examiner report a foam density. Indeed, the cited references are absolutely devoid of any values for foam density. *See, e.g.*, Cousin, col. 3, line 66 – col. 4, line 1. Therefore, the present independent claims, and their dependent claims, are believed to be patentable over all cited references, whether taken alone or in combination. Accordingly, Applicants respectfully request withdrawal of the foregoing rejections under 35 U.S.C. § 103(a), and allowance of all pending claims.

Applicants recognize that the Examiner relied on the Cousin reference to implicitly disclose the presently-recited ranges for foam density. *See* Office Action, pages 5-6. However, Applicants traverse the Examiner’s assertion that presently-recited numerical values for foam density need not be expressly disclosed in the Cousin reference, but can be implicitly disclosed as result-effective values. *See id.* Here, Applicants respectfully assert that the cited reference must expressly disclose the values for foam density to render the present claims obvious. As acknowledged by the Examiner, the foam density in Cousin is primarily based on the desired weight of the racket. The Examiner has not demonstrated that this basis for the Cousin foam density will provide values that read on the present claims.

Dependent Claims

The dependent claims are believed to be allowable by virtue of their dependency on an allowable base claim. Further, the dependent claims are also believed to be patentable because of the subject matter they separately recite. For example, dependent claim 6 recites wherein said second temperature is at least about 10 degrees Celsius less than the heat deflection temperature of the preformed polymer extrusion. In contrast, the

cited references do not disclose a specific increment of cooling below a heat deflection temperature. The Examiner contended such incremental temperature values are result-effective, and that one of skilled in the art, in view of the teachings of Kaspe, would optimize such temperatures. *See* Office Action, pages 7-8. However, the Examiner has not demonstrated that such alleged optimization would provide for a temperature at least 10 degrees Celsius below a heat deflection temperature. As mentioned, to establish a *prima facie* case of obviousness, the Examiner must show that the combination includes *all* of the claimed elements. *Ex parte Clapp*, 227 U.S.P.Q., at 972. Here, the Examiner has failed to meet this burden. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of claim 6 for this additional reason.

Improper Combination – Cousin and McLeod Teach Away From One Another

The Cousin and McLeod references teach away from one another and, therefore, are not properly combinable. *See In re Grasselli*, 713 F.2d 731 at 743. In formulating the combination of Cousin and McLeod, the Examiner relied on McLeod to teach a vinyl polymer. *See* Office Action, page 6. The Examiner proposed to modify the Cousin system to incorporate the vinyl polymer material disclosed in McLeod. *See id.*

However, the primary reference, Cousin, teaches the extrusion of *engineering performance* polymers, such as nylon, polyamide, polycarbonates, and polyacetals. *See* Cousin, col. 5, lines 37-49. In stark contrast, McLeod is directed to the processing of *recycled low-cost* materials, in direct conflict with the Cousin teaching of extruding *engineering performance* materials. *See, e.g.*, McLeod, col. 1, lines 31-33 and 50-67; col. 4, lines 48-50. Applicants emphasize that one of ordinary skill in the art would not use the *recycled low-cost* materials of McLeod in the Cousin process directed to extrusion of *engineering performance* materials.

In view of these different principles of operation and intended purposes, the Examiner's proposed combination of the Cousin and McLeod references is improper and cannot stand. The Examiner cannot use hindsight reconstruction to pick and choose among disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). For these reasons, Applicants respectfully requests withdrawal of the foregoing combination the corresponding rejections under 35 U.S.C. § 103.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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